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PRELIMINARY REPORT FROM SAIDOR, NEW GUINEA

Entomological -- In their preliminary report from Saidor, N.G., the 5th Malaria Survey Unit over a period of one week found approximately 54 stops yielding anophelines (principally A. p. mol. and A. p. punct.). The area surveyed was approximately seven miles long, and varied from one-half to two miles in width. A. p. punctulatus and A. p. moluccensis were often associated together in the same breeding place. The most unusual finding concerning A. punctulatus was the frequency with which it was found in almost stagnant water, and in heavy shade. At one stop A. p. punct. was found breeding in rain water contained in a trailer bed. A. p. moluccensis was found breeding abundantly in brackish water.

Typical breeding places were as follows:

Brackish water (in swampy areas, or near river mouths-6 stops	
Clear water pools along streams.....16	"
Bomb craters.....13	"
"Permanent" pools.....2	"
Pig wallow.....1	"
"Ponds".....6	"
Streams, very slow flowing.....6	"
Wheel ruts.....5	"
Slit trenches w/water.....2	"
Trailer bed.....1	"

Of these stops where anopheline larvae were taken 32 were sun-lit, 16 slightly to "medium" shaded, and 5 heavily shaded.

Parasitological - studies were made on two groups of natives. The first group consisted of 53 adult native laborers imported from the Lae and Wau districts immediately after the occupation of Saidor early in January. Seventeen (32%) were positive for malaria with P. vivax present in 14 individuals (26%), and P. falciparum in 3 (6%). There were no mixed infections. The blood of one native with P. vivax was also positive for the microfilariae of W. bancrofti.

The second group of natives were forty-eight (48) adults indigenous to the Saidor district. These natives for the most part had been some distance back in the hills during the period of the Japanese occupation. Of these eighteen natives (38%) were infected with malaria- ten (21%) with P. vivax, and eight (17%) with P. falciparum. Two natives infected with P. falciparum were carrying gametocytes of this species. Four natives, one of which was positive for P. vivax infection, showed the presences of microfilariae of W. bancrofti.

Information obtained from the ANGAU medical supervisor indicates that the Saidor and neighboring vicinities along this part of the New Guinea coast were hyperendemic malaria regions prior to the Japanese occupation. The splenic index in children at that time was 56%.

It is to be noted that the parasitic indices obtained in this preliminary malaria survey are the highest adult infection rate yet reported from New Guinea by any component of this organization.

SECRET

DENGUE

Dengue is becoming an increasingly important cause of morbidity from mosquito-born diseases in this theater. Annual rates as high as 2,000 per 1000 have been reported for January for the Finschhafen area.

Studies by the Australians on the vectors of dengue have led them to the following conclusions:

1. In the outbreaks in the Port Moresby town area, Aedes aegypti has been the vector. It was noted by MacKerras, however, that dengue occurred in similar form in the country about Port Moresby, and in Milne Bay, where A. aegypti could not be found. A survey of the other species commonly occurring in the areas was made, and in 1942, transmission experiments were carried out with certain of these. Inconclusive results were obtained with Mansonia uniformis (Theo.), Aedes vigilax (Sk.), Aedes similis (Theo.), and Aedes fumereus var. ornatus (Theo.).
2. Aedes albopictus (Sk.) has been established as a vector in the Phillipines and Sumatra, and has tentatively been regarded as such in certain areas where the disease has been recently epidemic.
3. Aedes scutellaria (Walk.), which occurred commonly during the period of the Milne Bay outbreak, was also widespread in certain recent epidemic areas on the NE coast, and has to be regarded as a suspect.
4. Armigeres obturans (Walk.), which has been regarded as a vector in in Formosa, also inhabits New Guinea, and is thought perhaps to be of significance in Milne Bay, and other areas of New Guinea.

Recent changes in location of our control units -- Captain Vaughan has moved with the 7th Control Unit to the Finschhafen area along with Captain King, of the 13th Control Unit. Captain Foster, 9th Control Unit, is also in this same area. The 5th Control Unit under Captain Reinke is doing good work in the Cape Gloucester, N. B. area along with Captain Darlington and the 26th Survey Unit. The 5th Survey Unit under Lt. Graham and the 15th Control Unit under Captain Brown are now working in the Saidor, N. G. area.

It is suggested that the roadside propaganda signs periodically be given a "general overhaul". This should include a washing, and also cutting down the high grass about the signs that may be obscuring them from vision.

Malariologists are advised to check at their local AG offices for copies of Administrative Memo No. 4, Hq, USASOS, Office of the Chief Surgeon, 10 January 1944. This memo, dealing with the preparation and forwarding of malaria case report cards, should be brought to the attention of all hospitals and medical officers treating malaria.

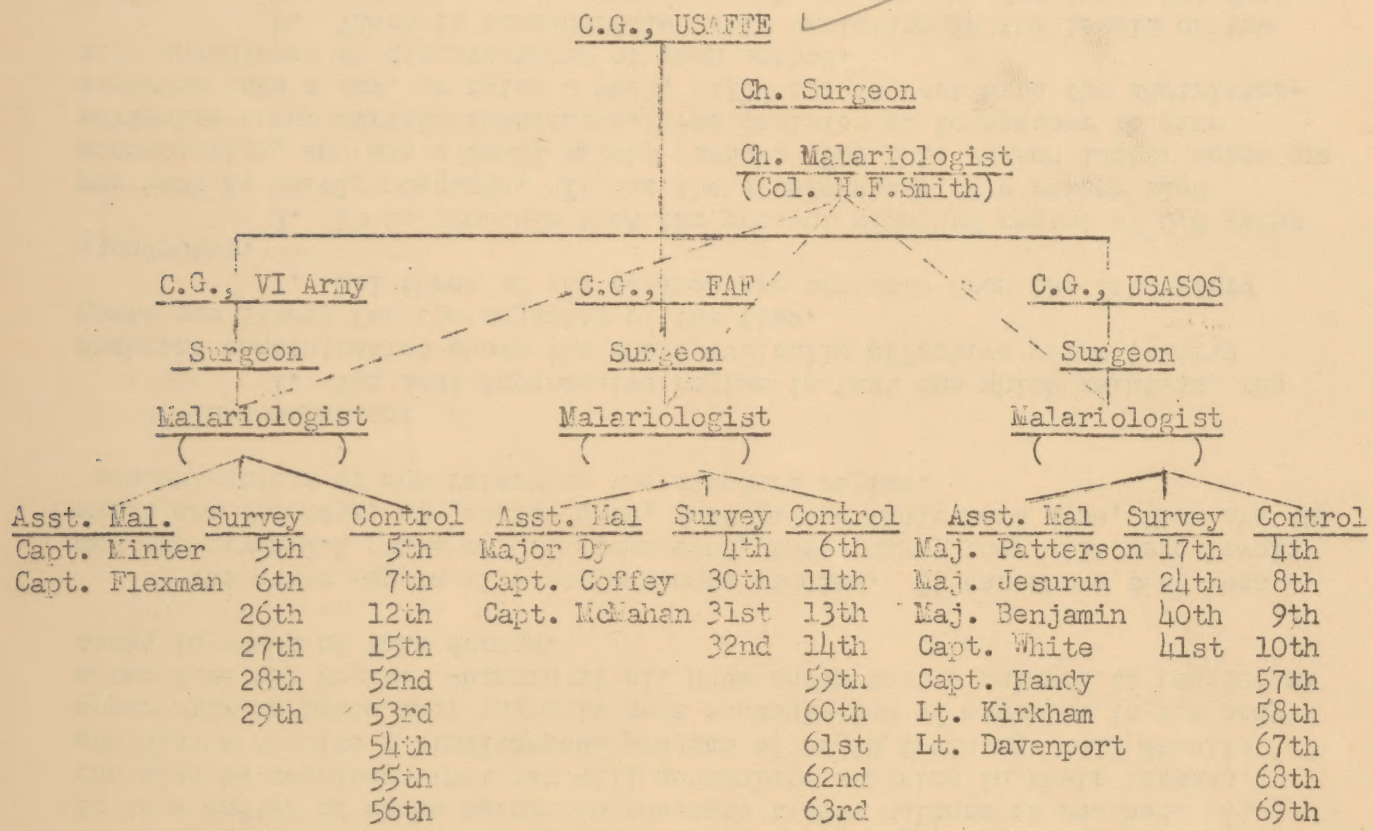
The following is quoted from Memo No. 6, Hq, USASOS, 18 January 1944:

"Section II- Malaria Control Oil:

1. Effective 1 April 1944 Automotive Diesel Fuel (QM item) will be used for malaria control purposes instead of Malariol (Engr item).

4. The Chief Engineer, this Hqs, will be responsible for providing sufficient Malariol until 1 April 44. (GSQM 710)"

The present tentative plan for the re-organization of the Malaria Control Organization is as follows (assignment of components versus attachment is yet to be decided):



ATABRINE STUDIES

The following is extracted from a recent report made by Lt. Frederick Bang, MC, who has been doing atabrine plasma studies in this theater.

The laboratory evaluation of various suppressive regimes of atabrine therapy is based on the assumption that the anti-malarial protection afforded an individual is related to the concentration in the plasma. It follows that it should be possible to determine a level which is adequate for a large body of men. Our estimate of 30 gamma per litre is based on a number of factors: (1) a number of individuals have their chills and fever halted by a concentration of 30 gamma per litre, while others have failed to respond until their level reached more than thirty; (2) all of the so-called "break-throughs" which we have had a chance to study have had levels below thirty; and (3) under field conditions, when malaria is suppressed by 0.6 gms per week, the concentration of atabrine varies just below the thirty gamma mark.

This concentration of atabrine is probably more than is actually needed to suppress the chills and fever of malaria in a great many cases, but because of individual variations it was thought best to make a conservative estimate which would cover the vast majority of cases. Any estimate such as this ignores the many other factors which keep the disease process suppressed - factors such as immunity, and general well-being.

We then come to the question as to how often and how long it is necessary to maintain an adequate level. It was a fairly frequent finding during the old treatment of malaria (0.3 gms atabrine a day for 5 days, then 0.1 gms 6 times a week) that a patient would relapse with chills and fever a couple of days after he left the hospital and forgot his atabrine, or started working. These men apparently had just enough atabrine in their plasma to keep the chills and fever in check, but once they got a little below this point, and other stimuli coincided, they immediately broke out with fever and chills. The fact that these attacks occurred so promptly after they stopped taking atabrine indicates that no incubation period was necessary. To translate this into parasitological terms, they constantly had enough parasites in their blood so that chills and fever could occur in a day or two. Our studies of patients about a month after they have had one of their first attacks of malaria show that 14% of them have enough parasites in their peripheral blood stream to be picked up on a routine thick smear of blood. This despite a continued adequate suppression of symptoms. We must then conclude that the best regime of suppressive atabrine is that one which maintains a concentration of about 30 gamma or more for the majority of the time. This belief is further supported by the fact that the effect of an adequate level of atabrine in the plasma may under certain circumstances be reversible, if the level falls.

Interest has centered on three types of therapy. The first of these is the standard suppressive therapy for the SWPA, namely, 0.1 gms 6 times a week. Shannon et al. have shown that normal, active, young adults accumulate atabrine in their tissue reservoir very slowly on this regime, so that it is a matter of weeks before an adequate tissue balance is reached. It can also be concluded that men will accumulate atabrine in their tissues and plasma despite a simultaneous program of rigid training. All results apparently indicate that there is some accumulation of atabrine in the body after five (5) weeks. Shannon et al. have shown that a balance is reached at about 10 weeks of this dosage.

Two other suppressive regimes were studied. It was shown that when men are given 0.4 grams or 0.5 grams every three days, they will have levels which are the same, or greater even, just before their next dose, than are the concentrations of men receiving the standard regime.

In conclusion:

1. The best suppressive regime is that one which maintains the atabrine concentration above the therapeutically effective point (thirty gamma per litre) for the majority of the time.
2. All three of the regimes are adequate from the laboratory standpoint.
3. It is probable that the present standard regime of 0.6 grams per week is barely adequate. It has the disadvantage of a rather slow accumulation, and has a small safety factor. For this reason larger doses are advisable under certain conditions. The decision as to whether to give atabrine once a day, or twice a week, will have to rest with the administrative advantages or disadvantages of each method.
4. There is considerable daily variation in the levels of individuals between doses. We have been unable to account for this, but feel that it is not great enough on an adequate dosage to influence the effectiveness of the program.
5. Although moderately severe exercise may cause a temporary reduction in the atabrine plasma level, it has no important lasting effect on the level.

SECRET

MALARIA RATES, January 1944, for the weeks ending:

	<u>USASOS</u>	<u>Sixth Army</u>	<u>FAF</u>	<u>14th AA</u>
1. Milne Bay				
7 Jan	45.54	25.27	20.78	-
14	28.98	15.16	0.0	-
21	47.85	26.85	39.23	-
28	22.77	53.70	19.96	-
2. Oro Bay - Dobodura				
7 Jan	237.0	248.0	112.0	-
14	174.0	101.0	65.0	-
21	121.0	112.0	119.0	-
28	71.0	66.0	106.0	-
3. Port Moresby				
7 Jan				
14	27.75	62.76*	24.24	0.0
21	28.86	62.60	20.28	132.0
28				
(* Inclds 503rd Par. Inf. Regt)				
4. Finschhafen				
7 Jan	155.0	-	20.0	78.0
14	212.0	-	0.0	0.0
21	75.3	-	73.8	80.0
28	51.0	-	55.8	0.0
5.	<u>Goodenough Is.</u>	<u>Kiriwina Is.</u>	<u>Woodlark Is.</u>	
7 Jan	63.0	-	-	
14	17.0	-	-	
21	20.0	-	-	
28	23.0	-	-	
6.	<u>Nadzab</u>	<u>Gusap</u>	<u>Lae</u>	
7 Jan	447.2	144.56	140.0	
14	379.6	143.52	211.0	
21	176.8	137.80	141.0	
28	-	118.04	100.0	
7. Miscellaneous - the following rates are computed from the Malaria Case Report Cards, and are <u>only an estimate</u> due to the facts that (1) not all cases being treated have a card submitted, and (2) not all cards for the month of January are in as yet. The following are annual rates per 1,000 for the month of January. They can be said to represent the malaria "evacuation" rate from New Britain to New Guinea and do not take into account those cases diagnosed and treated on New Britain.				
1st Marine Division (Cape Gloucester, N.B.) - 57.6				
U.S. Forces at Cape Gloucester, N.B. (incl. Marines) - 66.0				
U.S. Forces at Arawe, N.B. - 73.2				
(Note on the reporting of rates: Malariologists and components at Bases to report, if possible, the rates by weeks, with division into the four main components...SOS, Sixth Army, 5th Air Force, and the 14th AA Command.)				

SECRET

An excellent original article on Scrub Typhus, written by Captain Austin J. Corbett, 3rd Medical Laboratory, appears in The Bulletin of the U.S. Army Medical Department, No. 70, November, 1943. Material for this article was obtained from cases of scrub typhus occurring in the 32nd Infantry Division during the Buna-Gona Campaign.

The following important changes regarding the submission of malaria case report cards is extracted from Adm. Memo. No. 4, Hq, USASOS, Office of the Chief Surgeon, 10 January, 1944:

3. Each attack of illness in which "curative" treatment for malaria is instituted whether in hospital, dispensary, or in quarters, will be reported as malaria on the day such treatment is started.

6. The term "Undetermined", as applied to types of causative organism, is to be interpreted as including only those cases where examination of a blood smear reveals the presence of a plasmodium, of which differential identification as to species (vivax, falciparum, or malariae) cannot be made. When blood smears are negative, or where a smear is not made, and initiation of "curative" type treatment for malaria is indicated by symptoms and/or history, this fact will be indicated by checking "Diagnosis established by symptoms" in the indicated space, while the spaces for "Type of parasite" will be left blank.

JUNGLE JUICE LYRICS

By OMAR the TENTMAKER, ASN 000000000

Oh, Atabrine, dear Atabrine,
I love that yellow pill,
It keeps me so damn healthy that
I can't get out of drill!

If you'd avoid a nasty mess
I'll tell you what to do:
Just put on that repellent,
It's name is 6-1-2.

The Japs are Yellow. So are We;
That's due to Atabrine you see;
Their color is a sickly hue,
But ours is healthy thru and thru.

Mosquito salve, mosquito cream,
Those damn mosquitos make me scream!
They bite my feet, they bite my head,
But G.I. Repellent knocks them dead!

A malariologist, staying at a strange camp, was surprised at the number of mosquitoes to be seen. Upon meeting the Commanding Officer the next morning, he asked if they didn't have some type of mosquito control.

The C.O. was very much taken back and replied that they most certainly do have mosquito control. "That's more," he continued, "there isn't a single mosquito to be found in this camp."

The malariologist is reported to have said, "No, there certainly isn't. They are all married and have large families, too!"

Ensign L. J. Carleo, H (v) S, USNR, entomologist, with the 1st Marine Division Malaria Control Unit, and the 26th MSU have made preliminary surveys of the Cape Gloucester, New Britain area. As in other places A. p. moluccensis is the most commonly found anopheline both in the larval and adult form. The larvae apparently prefer the sun-lit, artificial breeding areas; however, larvae were taken in natural breeding places -- such as, slow-flowing, semi-obstructed, and semi-shaded streams which enter the ocean along a low, narrow, more or less open, marshy coastal strip. Forty female anophelines (A. p. moluccensis) were collected by Ensign Carleo, the majority of which were found inside of tents, mosquito bars, and jungle hammocks, in thirty-three collections. On dissection none of the adult mosquitoes -- several of which had taken blood meals -- were found to have either infected stomach walls or salivary glands.

The detachment of the 26th MSU at Finschhafen, under the command of Lt. Geo. L. Graham, has made an interesting entomological observation. They have found A. punctulatus sp. breeding in a flowing, clear water stream (Buka Creed). This occurred during a prolonged dry period with comparatively little rainfall. The stream water level was reduced with the consequent production of several shallows, and, in addition, some shore-line debris and vegetation served as an additional check on the stream flow. The stream was relatively exposed to sunlight. Larvae averaged 5 - 6 per dip.

With the cooperation of the Fifth Air Force, the 11th Malaria Control Unit at Nadzab is planning on doing some aeroplane (L-4) paris green dusting. We hope to have a complete news item on this for next month's paper. Plans for aeroplane-oiling are also under consideration.

A. barbirostris bancrofti var. pseudobarbirostris (Swell. and Rod.), as well as A. barbirostris bancrofti, has been found by the 4th MSU in the Gusap, Upper Ramu Valley area of New Guinea. The breeding place was in a stagnant stream which was characterized as being semi-shaded, water slightly muddy, and supporting much live algal growth. The banks of the stream had been cleared of growth.

The following is a recent newspaper clipping from the States which should, if carried out, be a big help to our educational program.

GALS, USE YOUR INFLUENCE!

Ever since there was front doors, I reckon, gals from 18 to 80 has been able to stand there an' say to their men: "Promise me you'll do what I say." An', by golly, they do it. Just at a word from some wisp of a woman, big, strong, stubborn guys turn docile an' button up their overcoats or put on their rubbers. The gals at the front door have got somethin'! I guess you'd call it influence.

An' that is why me an' the U.S. Army has cooked up a conspiracy. Because what the Army needs right now in all the hot countries is influence.

You see, Japs and Nazis ain't our only enemies in the hot countries. There's mosquitoes. I learnt about 'em from a medical administrative officer in the Army.

He said that at one time down in the Solomons we had far more boys sick from malaria as was hurt on the firin' line. An' there is other terrible diseases you get from bug an' mosquito bites.

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Seems that nothin' the Army can do will persuade all the boys to take care that they don't get bit. You can tell 'em how dangerous it is, but they just laugh an' say, "Who's afraid of a lousy mosquito?" Some won't even take their malaria pills.

One sergeant stood outside the mess-hall door. Every man that passed was made to open his mouth an' the top kick tossed a pill in. That is, he did till he discovered a lot of his pills -- on the floor -- just inside the mess hall!

Plumb discouragin', ain't it? But that's where influence comes in. I believe that you gals ought to write your husbands or your boy friends or your sons or grandsons -- whoever it is you got out there. Write 'em one of them front-hall "promise me" talks you're so good at. I'll bet you'd sure get some action.

All the boys really have to do, this officer says, is this: 1. Keep covered up after dark; 2. Use the regular Army mosquito dope on their hands an' faces; 3. Sleep under nets; 4. Take their pills. But mostly they gotta want to avoid malaria.

I bet it'll work. An' wouldn't it be somethin' if maybe the gals here at home was to make the Army overseas enough stronger so that you actually shortened the war?

WALLY BOREN

~~SECRET~~